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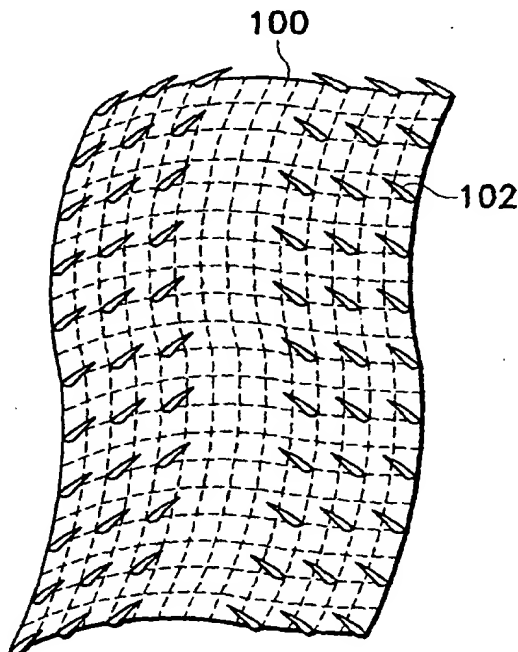
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(54) Title: TISSUE APPROXIMATION DEVICE AND A METHOD USING IT



(57) Abstract: A tissue approximation device and processes for using the device are provided. The device is an implantable, biodegradable construct (except for hernia repairs) that has attachment points emanating from a supportive backing. The device improves the mechanical phase of wound healing and evenly distributes tension over the contact area between the device and tissue. Processes for using the device include wound closure, vascular anastomoses, soft tissue attachment and soft tissue to bone attachment. Several variations are particularly applicable to facilitating tissue approximation in surgical cosmetic applications including, for example, orbital rim reconstruction and tissue suspension.

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# INTERNATIONAL SEARCH REPORT

In tional Application No

PCT/US 01/16346

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A61B17/08 A61B19/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 744 623 A (MXM) 14 August 1997 (1997-08-14)	1,6,7, 24-26, 34,158, 161,162, 193
Y	page 9, line 9 - line 30; figures 2,10	2,22,23, 190,191
A		43,48, 64,110, 116
Y	US 5 425 747 A (BROTZ GREGORY R) 20 June 1995 (1995-06-20)	2,22,23, 190,191
A	abstract; figure 1	1,43,64, 110,116
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*8\* document member of the same patent family

Date of the actual completion of the international search

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## INTERNATIONAL SEARCH REPORT

In International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, A	WO 00 49983 A (BENCHABANE MAHMED ; PHANEUF SIMON (CA); ADVANCED THERAPEUTIC TECHNO) 31 August 2000 (2000-08-31)	1, 5-7, 17, 43, 48, 64, 76, 79, 81, 96, 110, 112, 115, 116, 161, 162, 193
	page 7, line 15 - line 25; figures 1, 3	
A	US 4 430 998 A (HARVEY ROBERT J ET AL) 14 February 1984 (1984-02-14)	1, 3, 5-7, 20, 21, 24-26, 34, 43, 48, 64, 110, 116, 161, 193
	the whole document	
A	US 5 919 234 A (CALHOUN CHRISTOPHER J ET AL) 6 July 1999 (1999-07-06)	1, 2, 15, 22, 23, 43, 46, 47, 64, 67, 69, 74, 110, 111, 114, 158, 190, 191
	abstract; figure 3A	
A	US 5 047 047 A (YOON INBAE) 10 September 1991 (1991-09-10) figure 12	1, 43, 64, 110, 116

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/16346

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 52-63, 124-137, 206-218  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-51, 64-123, 152-205, 228-234

Implantable tissue approximation device

2. Claims: 138-151

Tool for deploying the approximation device.

3. Claims: 219-227, 235

Fracture fixation fastener.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

In International Application No

PCT/US 01/16346

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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